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International Specialists in the Environment

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September 11, 2008

Via: E-Mail

Ms. Erin Rednour
Illinois Environmental Protection Agency
Federal Sites Management Unit
Division of Remediation Management
Bureau of Land, Mail Code #24
1021 North Grand Avenue East
Springfield, Illinois 62794-9276

Re: 2008 Field Sampling Plan
11090400008-Madison Co.
Jennison-Wright/Granite City
Superfund

Dear Ms. Rednour:

Ecology & Environment Engineering, Inc., (EEEI) is pleased to submit to the Illinois Environmental Protection Agency (Illinois EPA) this Field Sampling Plan (FSP) for soil sampling and analysis, and continued groundwater monitoring at the Jennison-Wright (JW) Superfund site located in Granite City, Illinois. The purpose of this FSP is to define areas that may need further remediation and/or have institutional controls established and to provide on-going monitoring of the shallow groundwater contaminant plume.

1. FIELD INVESTIGATION

This proposed field investigation has been designed to acquire physical and chemical data for soil and groundwater at the JW site. The soil results will be used to characterize the potential that former near-surface contaminant sources may have impacted soil along 22nd Street, the alley running parallel to the west side of the site, and Area H. The groundwater results will be used to evaluate the effectiveness of the series of Hydrogen Release Compound (HRC®) injections that have been conducted to address shallow pentachlorophenol (PCP) groundwater contamination. In order to accomplish this task, EEEI plans to assess potential contamination by collecting low-flow water samples from existing monitoring wells, collecting low-flow samples using a Geoprobe™ groundwater sampling device, and shallow soil samples.

2. SOIL INVESTIGATION

General Soil Sampling Rationale

Based on the site-specific cleanup objectives established for the site in the Record of Decision, semivolatile organic compounds (SVOCs) are the main drivers for the remedial action being undertaken for site soils. Therefore, soil samples collected as part of this proposed investigation will be submitted for SVOC laboratory analysis using EPA Method SW 8270. Figure 1 provides the locations for the proposed soil sampling locations.

2.1.1 22nd Street

Review of the analytical results from soil sampling conducted as part of the 1999 Engineering Evaluation/Cost Analysis (EE/CA) indicates that off-site surface soil and subsurface soil may exceed the established cleanup objectives along 22nd Street. Soil sampling in this area was beyond the scope of the soil investigation for the EE/CA. Therefore, the Illinois EPA has requested that a limited soil investigation be performed along 22nd Street to determine the possible nature and extent of soil contamination.

When the facility was active, there were a total of 4 rail spurs that crossed 22nd street and were located within the eastern and western boarders of the site. For each rail spur, a total of 4 borings will be conducted for a total of 16 borings along 22nd Street. Borings will be conducted in the shoulder area immediately adjacent to 22nd street and will border the outside edges of the spur. At each spur, two borings will be located on the south side shoulder, while the other two will be located on the north side shoulder.

While each of the 16 borings will extend 4 feet BGS, the depth from which a sample will be collected will be based on any visual evidence of contamination within the soil boring. If no visual evidence is present, the sample will be taken from the uppermost section of undisturbed native material. If undisturbed native material is not evident then the sample interval will be 1-2 feet below any road surfacing material.

2.1.2 West Side Alley

In the vanity of the former PCP process area, an alley runs parallel to this production area. Deep soil contamination has been encountered in this area and is believed to extend at least to the property line. While excavation of soils in the alley is prohibited due to the presence of multiple subsurface utilities, it is necessary to determine whether contamination above the risk-based cleanup objectives is present.

Therefore, 4 Geoprobe™ borings are proposed for this area. Figure 1 depicts the location of the borings. While each of the 4 borings will extend to the water table (i.e., approximately 18 feet BGS), the depth from which a sample will be collected will be based on

AH3
AH2
AH1
AREA H
MW-2S
01
MW-12S
MW-13S
02
GP44
SB15
SB13
SB16
SB14
22ND STREET LAGOON (AREA G)
MW-14S
MW-5S
MW-5D
GP65
TELEPHONE POLE W/ GUY WIRE
MW-15S
GP51
05
GP52
MW-17S
JENNITE PIT (AREA E)
03
GP66
GP49
22ND STREET
MINI-HYDRANT
MW-16S
06
GP53
MW-18S
GP67
MW-6S
MW-6D
MW-6M
04
MW-1S
MW-1D
SB11
SB9
SB12
SB10
DECONTAMINATION PAD
SB7
SB8
SB5
SB6
MW-9S
MW-9D
MW-9M
07
MW-19S
AREA C
GP56
SANITARY SEWER DROP PIPE
GP57
08
MW-8D
MW-3D
MW-3S
SB3
SB4
MW-4S
MW-8M
MW-8S
GP58
MW-10S
MW-11M
MW-11S
SB1
SB2
ALLEY
SB17
SB18
SB19
GP61
SB20
GP60
GP59
GP64
GP63

SCALE IN FEET:
0 100 250

N

L E G E N D:

– FENCE
– HRC BARRIER TRENCH
– PROPOSED GEOPROBE SAMPLING LOCATION
– PROPOSED MONITORING WELL SAMPLE
– MONITORING WELL (NOT SAMPLED)
– PROPOSED SOIL SAMPLE LOCATION

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2008 PROPOSED SOIL AND GROUNDWATER SAMPLING LOCATIONS

JENNISON–WRIGHT SITE
GRANITE CITY, ILLINOIS

DESIGNED BY	CHECKED BY
J. SHUPTAR	C. STINEMAN
DRAWN BY	APPROVED BY
T. CAMPBELL	N. BROWN

SCALE	DATE ISSUED	C.A.D. FILE NO.	DRAWING NO.	REV.
SEE ABOVE	02/2005	IE1P_GP_FSP 021605	1	

R:\Engineering Projects\Jennison Wright\Drawings\IE1P_GP_FSP 091108.dwg

any visual evidence of contamination within the soil boring. If no visual evidence is present, the sample will be taken from lowermost section of undisturbed native material. The lower most section was selected due to the fact that groundwater samples in this area have detected PCP concentrations above its respectively maximum contaminant level of 1 microgram per liter.

2.1.3 Drainage Swale Soil Sampling (i.e., North of Area H)

Previous excavation activities have addressed the majority of contamination found in Area H. However, given the lack of access due to the elevated rail lines located immediately to the east of Area H, excavations can no longer be performed in a safe manner. In order to determine whether contaminant concentrations above the established cleanup objectives are present in near surface soils located immediately north of Area H, soils samples will be collected and submitted for laboratory analysis.

To assess possible soil contamination in this area, hand auger borings are proposed in the north east corner of the site in the drainage swale located beyond the existing fence. Prior to initiating sampling, the swale will be inspected for visual evidence of contamination and/or stressed vegetation.

The collection of three soil samples within this area are proposed. In the event that the visual inspection does not indicate potential areas of contamination, starting 50 feet from the fence, a hand augured sample will be collected. Two additional samples, space 50 feet from each other, will also be collected. Therefore, the total distance from the fence that will be covered by the sampling will be 150 feet. Hand auger samples will be collected from the 1 to 3 foot BGS interval.

2.2 Geoprobe™ Soil Sampling Procedures

A Geoprobe™ direct push sampling device will be used at all proposed soil sampling locations except those the may prove to be inaccessible to the Geoprobe™ (i.e., Area H/Drainage Swale). The Geoprobe™ will be utilized to collect subsurface soil samples to a maximum depth of 4 feet below ground surface (BGS). For inaccessible locations, a stainless steel hand auger will be used to collect a sample to a maximum depth of 3 feet BGS.

Subsurface soil samples will be collected using a four foot long Macro-Core soil sampling device with PVC sleeves in accordance with EEEI's standard operating procedures (SOPs). Subsurface soil samples will be screened for the presence of volatile organic compounds (VOCs) using a portable field unit such as a photo ionization detector (PID) in accordance with approved SOPs. Soil from each 2-foot interval collected from the Macro-Core sampler will be transferred to a closed sample container, allowed to equilibrate, then screened for VOCs by sampling the headspace with a PID or similar device.

The purpose of the headspace analyses will be to document the presence of VOCs as a general field observation. The PID also will be used for health and safety purposes. The PID readings will not be used to select the soil sample depth interval for laboratory analysis.

Soil Sampling Equipment

- Macro-Core soil sampling device (4 feet long) with PVC liners
- Stainless steel hand auger
- Stainless steel bowls and spoons for processing samples
- Photo-ionization Detector
- Packing and shipping materials

Geoprobe™ Procedures

- The sampler is driven into the subsurface using the percussion of the direct push rig and the initial core sample collects in the liner sampler.
- The sampler is then extracted from the boring and the sample sleeve is removed.
- A new liner is placed in the sample tube. The sampler is advanced to the last depth of penetration by adding a series of drive rods, and the procedure is repeated.

3 GROUNDWATER INVESTIGATION

Groundwater sampling and analysis is proposed to further evaluate the effectiveness of the multiple injections of HRC® in reducing dissolved PCP contamination at the JW site. In order to accomplish this task, EEEI plans to further delineate groundwater contamination at the site by collecting 30 groundwater samples from 15 locations using a Geoprobe™ rig in addition to sampling the 12 existing groundwater monitoring wells.

Groundwater samples will be submitted for Target Compound List (TCL) SVOC Method 8270C , PCP Method 8151, and Volatile Organic Compounds (VOC) Method 8260B analysis in accordance with sampling rational. Table 1 provides a summary of the sampling locations and proposed analysis.

3.1 Monitoring Well Water Level Measurements

Prior to any groundwater sampling activities at the JW site, static groundwater level measurements will be collected from all on-site monitoring wells in a single day (see Figure 1). The purpose of the survey is to interpret the elevation data and determine groundwater flow conditions at the site. Groundwater measurements will be collected using the equipment and procedures described below.

Equipment

- Electronic water level indicator graduated to 0.01 foot.

Procedures

- Slowly lower the electronic water level probe until the indicator light illuminates and/or the alarm sounds;
- Pull the probe above the water surface and repeat the measurement;
- Note the depth to water from a marked reference point on the well casing or surface water marker in EEEI's Geotechnical logbook; and
- Decontaminate any part of the water level indicator that was submerged by triple-rinsing it with deionized water prior to use at the next location.

3.2 Groundwater Monitoring Well Sampling

One round of groundwater samples will be collected from the 12 selected monitoring wells (see Figure 1) at the JW site using a peristaltic pump capable of obtaining low flow. New disposable polyethylene tubing will be used at each monitoring well location for purging and sampling purposes. All groundwater samples will be submitted to the laboratory for SVOC and PCP analysis. Additionally, select monitoring well samples will be submitted for VOC analysis. See Table 1 for a breakdown of analysis by sample location. Groundwater sampling will be performed using the equipment and procedures described below.

Equipment

- Electronic water level indicator graduated to 0.01 foot;
- Peristaltic pump and new disposable polyethylene tubing;
- pH/temperature/conductivity meter;
- Turbidity meter;
- Dissolved oxygen (DO) meter;
- Appropriate sample containers (see below); and
- A cooler with ice.

Procedures

Several water quality measurements will be monitored in the field to control the representativeness and consistency of water samples collected. The measurements will be monitored for each well sampled. In order to collect water quality measurements, a Horiba model U-22, or a similar instrument, will be used. Parameters will be continuously monitored during well purging and data will be recorded in the field logbook.

Purging of the temporary and permanent monitoring wells will be accomplished using the low-flow technique. Hydraulic stress will be minimized by low water-level drawdowns,

and low pumping rates (usually less than 1 liter/minute) in order to collect samples with minimal alterations to water chemistry. A peristaltic pump with disposable polyethylene tubing will be used to purge and sample each monitoring well. By using the low-flow collection method, groundwater samples will not need to be filtered, and the analytical results will be more representative of the actual condition of the aquifer. During purging and sampling, the tubing intake will be placed near the midpoint of the saturated screen interval.

Before sample collection, each well will be purged until the measurements of specific conductance, pH, and turbidity stabilize for three successive readings. Field measurements of these parameters will be taken every three to five minutes (or as appropriate) during purging. Any pumping rate changes will be recorded in the field logbook (both time and flow rate).

Stabilization will be considered achieved when three consecutive readings, taken at three- to five-minute intervals, are within the following limits:

- Specific conductance (temperature-corrected): ±10% of the reading range;
- pH: ±0.2 standard unit;
- Turbidity: ±10% or less than 10 nephelometric turbidity units (NTUs).

Upon stabilization of these parameters, the groundwater samples will be collected. If stabilization of the field parameters cannot be reached, the well will be sampled after the equivalent of three well volumes of water have been evacuated from the well.

Immediately after parameters have stabilized in the wells for three successive readings or the well has been purged of the equivalent of three well casing volumes, the well will be sampled. Groundwater samples will be collected at the same flow rates used to purge the wells. All samples requiring preservation will be transferred into appropriate pre-preserved sample containers.

Sample characteristics such as color, odor, and field parameter readings will be recorded in the field logbook when the samples are collected. Duplicate groundwater samples must be collected simultaneously in equal volumes from the same location with the same equipment and placed into identical containers. Duplicate groundwater samples will be preserved and handled in the same manner as all of the other groundwater samples.

3.3 Geoprobe™ Groundwater Sampling

Thirty groundwater samples will be collected from 15 borings to be performed at the JW site using a truck-mounted Geoprobe™ rig. The proposed locations for the Geoprobe™ borings are presented in Figure 1. Based on site conditions, the actual locations may be adjusted during the field investigation. At each Geoprobe™ boring location, a covered

slotted screen will be driven to the water table or to a maximum of 30 feet bgs, the cover will be retracted, and at least one volume of groundwater will be extracted through the rods prior to sample collection. Groundwater samples will be collected during boring activities and submitted for laboratory analysis at the conclusion of each field day. EEEI will measure from existing monitoring wells to establish the horizontal position of the Geoprobe™ sample locations. Groundwater sampling will be performed using the equipment and procedures described below.

Equipment

- Electronic water level indicator graduated to 0.01 foot;
- Peristaltic pump and new disposable polyethylene tubing;
- pH/temperature/conductivity meter;
- Turbidity meter;
- Appropriate sample containers (see below); and
- A cooler with ice.

Procedures

- Slowly lower the electronic water level probe until the indicator light illuminates and/or the alarm sounds to ensure groundwater is present in the Geoprobe™ rods;
- Slowly lower the disposable polyethylene tubing to a depth corresponding to the slotted or screened interval of the Geoprobe™ rods and purge at a sustainable rate without dewatering the well point;
- Collect the groundwater sample starting with the VOC portion first followed by the SVOC portion. When transferring water from pump tubing to sample bottles, avoid agitating the sample, which promotes the loss of volatile constituents;
- Once sampling is competed, record the temperature, pH, conductivity, and turbidity in the logbook;
- Immediately upon collection, place the samples in a cooler maintained with ice at 4°C; and
- Package and ship the samples to the laboratory via overnight delivery with chain-of-custody (COC) documents prepared in accordance with the procedures outlined below.

3.4 General Groundwater Sampling Rationale

Upon review of groundwater analytical data collected in August, 2007 at the JW site, Table 1 and Figure 1 provide the sampling locations and recommend analysis for the 2008 field effort. The parameters and locations are designed to further delineate impacted areas to facilitate future corrective action.

In the EE/CA, the groundwater velocity was calculated using an average hydraulic gradient of 0.000949 feet/feet, an average hydraulic conductivity of 0.0179 feet per

Table 1 Summary of Groundwater Sampling Locations and Analysis
2008 Sampling Event
Jennison-Wright Superfund Site
Granite City, Illinois

Location	Analytical Parameter			Sampling Rational
	SVOC	PCP	VOC	
Geoprobe Locations				
GP49	•	•	•	Continue to sample for VOC and SVOC/PCP for delineation
GP49D	•	•	•	Continue to sample for VOC and SVOC/PCP for delineation
GP51	•	•	•	Continue to sample due to exceedances
GP51D	•	•	•	Continue to sample due to exceedances
GP52	•	•	•	Continue to sample and add a deep sample
GP52D	•	•	•	Add a deep sample for vertical delineation
GP53	•	•	•	Continue to sample due to exceedances
GP53D	•	•	•	Continue to sample due to exceedances
GP56	•	•		Continue to sample and add a deep sample
GP56D	•	•		Add a deep sample for vertical delineation
GP57	•	•		Continue to sample and add a deep sample
GP57D	•	•		Add a deep sample for vertical delineation
GP58	•	•		Continue to sample and add a deep sample
GP58D	•	•		Add a deep sample for vertical delineation
GP59	•	•		Continue to sample and add a deep sample
GP59D	•	•		Add a deep sample for vertical delineation
GP60	•	•		Continue to sample and add a deep sample to monitor PCP contamination
GP60D	•	•		Continue to sample and add a deep sample to monitor PCP contamination
GP61	•	•		Continue to sample due to exceedances
GP61D	•	•		Continue to sample due to exceedances
GP63	•	•		Add boring for better delineation of PCP contamination
GP63D	•	•		Add deep sample to new boring for vertical delineation
GP64	•	•		Add boring for better delineation of PCP contamination
GP64D	•	•		Add deep sample to new boring for vertical delineation
GP65	•	•		Add boring for better delineation of contamination
GP65D	•	•		Add deep sample to new boring for vertical delineation
GP66	•	•	•	Add boring for better delineation of contamination
GP66D	•	•	•	Add deep sample to new boring for vertical delineation
GP67	•	•	•	Add boring for better delineation of contamination
GP67D	•	•	•	Add deep sample to new boring for vertical delineation
Groundwater Monitoring Wells				
MW2S	•	•		Continue to sample due to exceedances
MW5S	•	•	•	Continue to sample due to exceedances
MW5S(Dup	•	•	•	Continue to sample due to exceedances
MW5D	•	•	•	Add Sample for vertical delineation
MW6S	•	•	•	Continue to sample due to exceedances
MW6M	•	•	•	Add Sample for vertical delineation
MW6D	•	•	•	Add Sample for vertical delineation
MW8S	•	•		Continue to sample due to exceedances
MW8M	•	•		Add Sample for vertical delineation
MW8D	•	•		Add Sample for vertical delineation
MW16S	•	•	•	Continue to sample due to exceedances
MW17S	•	•	•	Continue to sample in order to delineate contamination
MW18S	•	•	•	Continue to sample in order to delineate contamination

KEY:

SVOC = Semivolatile organic compound,
PCP = Pentachlorophenol,
VOC = Volatile organic compound,

minute, and an assumed effective porosity of 30%. With these values, a groundwater velocity of 0.0815 feet per day (approximately 30 feet per year) was estimated for the groundwater flow at the site.

Given this average velocity, an estimate of the distance for migration of contaminants of was made, and the new boring locations are proposed to further delineate contamination extent in areas of potential migration.

It should be noted that the most recent groundwater sampling results revealed a significant difference in the concentrations of contaminants when samples were taken at different depths in the same boring. Therefore, additional depth intervals are proposed for existing Geoprobe™ locations and additional well sampling is proposed for wells that extent to the middle and deep depths to further delineate vertical extent of contamination. Additional justification for the selected groundwater sampling locations is provided.

Sampling Rationale for Area Near MW2S

Due to a slight exceedance in PCP, it is recommended that MW2S will be sampled for monitoring purposes. No additional sampling in the vicinity of MW2S is recommended.

Sampling Rationale for NAPL Area

MW5S, GP52, GP51, and GP51D will continue to be sampled due to exceedances in the most recent groundwater sampling. MW17S and WM18S will continue to be sampled to delineate the contamination and to evaluate the effectiveness of the HRC® barriers that were injected. Additional samples MW5D, GP52D, GP65, GP65D, GP66, and GP66D are added to vertically and laterally delineate impacted areas.

Sampling Rationale for Benzene/UST AREA

Four locations from the most recent groundwater sampling round in August 2007 detected exceedances for benzene. The highest detections were collected from locations in the middle of the site near the south side of 22nd St. near the location of UST removals. MW16, GP49, MW5S and GP53 all had exceedances for Benzene and are recommended for further sampling. Locations GP51, GP52, MW17, MW18, MW6S, MW6M, and MW6D are recommended to have VOCs added to the sample parameters to delineate Benzene migration. Additional sample GP67 is added to replace GP50 and better delineate the migration of Benzene.

Sampling Rationale for PCP Area (Near MW8S)

MW8S, GP59, GP61 and GP61D are recommended to be sampled due to exceedances in the most recent groundwater sampling event. GP56, GP57, GP58, GP60 and GP60D will continue to be sampled in order to delineate the known PCP contamination. GP56D, GP57D, GP58D, and GP59D are added for vertical delineation. Due to the spatial

distribution of the monitoring wells, there is some uncertainty regarding the groundwater flow direction. Because of the directional uncertainty and that contamination is migrating offsite, GP64, GP64D, GP63, and GP63D have been added in order to further delineate the migration of PCP.

Sampling Rationale for MW6

Due to a slight exceedance in PCP, it is recommended that MW6S continue to be sampled for monitoring purposes. MW6M and MW6D are also recommended for future sampling in order to increase the spatial distribution of the vertical delineation in the medium and deep portion of the aquifer.

4. SAMPLE CONTAINERS AND PRESERVATION

The volumes and containers for water samples as well as sample preservation and holding time requirements are presented in Table 2. Groundwater samples will be collected in pre-washed containers provided by the laboratory and prepared in accordance with United States Environmental Protection Agency bottle-washing procedures.

Groundwater samples will be stored on ice pending delivery to the laboratory. Chemical preservation using hydrochloric acid will be required for VOC samples.

Table 2: Sample Containers, Volumes, Preservation, and Holding Times

Parameter	Method	Containers for Aqueous samples	Preservation	Holding Time
TCL VOCs	EPA 8260 B	Two 40-ml glass vials with septa	Cool to 4ºC, HCl	7 days
TCL SVOCs*	EPA 8270 C	Three 1-liter amber bottles	Cool to 4ºC	7 days

* Pentachlorophenol analysis will be performed using Method 8270 SIM to achieve a detection limit of 1 µg/L.

Key:
EPA = U.S. Environmental Protection Agency.
ml = Milliliter.
µg/L = Micrograms per liter.

5. SAMPLE LABELING, PACKAGING AND SHIPPING, AND CUSTODY

5.1 Sample Labeling

All samples will be assigned a unique sample identifier. Labels for each sample container will contain the sample identifier, date of sample collection, analytical parameters, and type of preservation used. The sampler will initial any change in the label information prepared prior to sample collection.

5.2 Sample Packaging and Shipping

Groundwater sample containers will be placed inside sealed plastic bags as required for shipping in case of leakage or breakage. They will be placed in coolers in such a manner as to eliminate the chance of breakage during shipment, and ice in plastic bags will be placed in the coolers to keep the samples at 4ºC throughout shipment.

Sample will be shipped in strict accordance with all applicable United States Department of Transportation (DOT) regulations. The samples will be shipped to the laboratory by an overnight courier service. Arrangements will be made with the laboratory project manager for samples that are to be delivered on the weekend so that holding times are not compromised. The shipping address is as follows:

Test America Laboratories
2417 Bond Street
University Park, IL 60466
708.534.5200 Fax: 708.534.5363

5.3 Sample Custody

A sample is considered to be in custody under the following conditions:

- The sample is directly in one's possession,
- The sample is clearly in one's view,
- The sample is placed in a locked location, or
- The sample is in a designated secure area.

In order to demonstrate that the samples and coolers have not been tampered with during shipment, adhesive custody seals will be used. The seals will be signed or initialed and dated by field personnel at the time they are affixed to the cooler.

Documentation of sample COC is necessary to demonstrate that the integrity of the samples has not been compromised from the time of collection to delivery to the laboratory. A COC record will accompany each sample cooler to document the transfer of custody from the field to the laboratory. All information requested in the COC record will be completed. In addition, the airbill number assigned by the overnight courier will be listed on the COC record. One copy of the COC form will be retained by the sampler

and placed in the project records file. The COC will be sealed in a plastic bag and placed inside the cooler. Upon receipt at the laboratory, the COC forms will be completed. It is the responsibility of the laboratory to document the condition of custody seals and sample integrity upon receipt.

6. FIELD QUALITY CONTROL SAMPLES

Field QC samples include field duplicates and trip blanks. Field duplicates will be collected from aqueous samples at a frequency of one per 20 samples. Trip blanks will be filled at the laboratory and transported to the site with the bottles for each day VOC samples are collected. One trip blank will accompany each shipment of VOC samples shipped to the Laboratory. All sample portions for VOCs collected on a single day will be transported in the same cooler.

7. DECONTAMINATION PROCEDURES

All decontamination will be performed in accordance with Illinois EPA-approved procedures. Sampling methods and equipment have been chosen to minimize decontamination requirements and prevent the possibility of cross-contamination. All intrusive and groundwater sampling equipment will be decontaminated before and after each location is drilled and sampled. Special attention will be given to all downhole tooling, which will be decontaminated prior to and following each use. Decontamination of large equipment will consist of the following:

- Removal of foreign matter; and
- High-pressure steam cleaning.

The following alternative procedure will be used for smaller equipment and may also be employed for downhole tooling:

- Initially remove all foreign matter;
- Scrub with brushes using a trisodium phosphate (TSP) solution;
- Rinse with deionized water; and
- Allow to air-dry.

These procedures will be conducted at each boring location to decontaminate Geoprobe™ rig units and downhole tooling.

8. REPORT

As stated in the Illinois EPA-approved budget estimate for construction oversight and operations and maintenance at the JW site, a report of the findings will be prepared. This report will delineate site contamination and compare the results to pre-HRC® conditions

to assess the effectiveness of HRC® and to identify contaminant trends in groundwater at the site. The report will be submitted 21 days after receipt of laboratory data.

If you have any questions or require additional information, please do not hesitate to contact me at 312/578-9243 or by e-mail at nbrown@ene.com.

Sincerely,

Neil J. Brown, P.E.
Project Manager

Attachments